

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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Hartford CT 06103 USA

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **25 SEPTEMBER 2008 (25.09.2008)**

Applicant's or agent's file reference
INE-0110-PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US2008/059551

International filing date (day/month/year)

07 APRIL 2008 (07.04.2008)

Priority date(day/month/year)

06 APRIL 2007 (06.04.2007)

International Patent Classification (IPC) or both national classification and IPC

A61B 17/04(2006.01);

Applicant

INTERVENTIONAL THERAPIES et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR
Korean Intellectual Property Office
Government Complex-Daejeon, 139
Seonsa-ro, Seo-gu, Daejeon 302
-701, Republic of Korea
Facsimile No. 82-42-472-7140

Date of completion of this opinion

25 SEPTEMBER 2008 (25.09.2008)

Authorized officer

OH Seung Jae

Telephone No.82-42-481-8469



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2008/059551

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of :

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
- ☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US2008/059551

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2,3	YES
	Claims	1, 4-6	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-6	NO
Industrial applicability (IA)	Claims	1-6	YES
	Claims	NONE	NO

2. Citations and explanations :

Reference is made in the present opinion to the following documents (D) cited in the search report.

D1: US 6641592 B1 (JUDE S. SAUER AND JOHN F. HAMMOND) 4 November 2003

D2: US 6368334 B1 (JUDE S. SAUER) 9 April 2002

1. Novelty and Inventive Step

1.1 Claim 1

Document D1, which is considered to represent the most relevant state of the art, discloses a system for closure of a wound in a patient like a puncture hole in a blood vessel, with a suture having a first apparatus for applying a suture capable of closing the wound and a second apparatus for securing a sleeve member over the suture to secure the wound closed.

As all of the features of claim 1 are disclosed in D1, this claim is anticipated by D1 (see abstract; Col.7, Lines 15-45). Therefore, claim 1 lacks novelty under PCT Article 33(2).

1.2 Claims 2 and 3

D1 does not disclose the features of the crimping and cutting device portion which are configured to detach from the suturing device portion and to nest within a portion of the suturing device portion. But D2 discloses a kit comprising a suturing device and a suture crimping device which can be combined through the cannula (see Col. 11, Lines 1-11; Figs. 28-30). It would be obvious to a person skilled in the art to apply the features of D2 to the tissue suturing apparatus of D1 to arrive at the surgical apparatus of claims 2 and 3. Thus, claims 2 and 3 do not involve an inventive step under PCT Article 33(3).

1.3 Claim 4

The additional feature of claim 4 dependent on claim 1 is not different from the feature of D1 in including a tissue engaging section of the tissue suturing apparatus. Accordingly, claim 4 is substantially the same as D1. Therefore, claim 4 lacks novelty under PCT Article 33(2).

(Continued on Supplemental Box.)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of :

Box V.

1.4 Claims 5 and 6

D1 discloses a system for closure of a wound in a patient with a suture material having two ends comprising: a first apparatus comprising a housing, a shaft having a first end and a second end in which said first end is coupled to the housing, a tissue engaging section coupled to said second end of said shaft, and a first needle and a second needle, wherein said first and second needles extend from the housing through the shaft into said tissue engaging section; and a second apparatus having means for securing a sleeve member over the two ends of the suture material to maintain said wound closed at said first and second locations in said tissue.

All of the technical features of claims 5 and 6 are also inherently disclosed in D1. Accordingly, claims 5 and 6 of the present invention are anticipated by D1. Therefore, these claims lack novelty under PCT Article 33(2).

2. INDUSTRIAL APPLICABILITY

Claims 1-6 are industrially applicable under PCT Article 33(4).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference INE-0110-PCT	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2008/059551	International filing date (day/month/year) 07 APRIL 2008 (07.04.2008)	(Earliest) Priority Date (day/month/year) 06 APRIL 2007 (06.04.2007)
Applicant INTERVENTIONAL THERAPIES et al		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II)

3. ☐ Unity of invention is lacking (See Box No. III)

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 51
☒ as suggested by the applicant.
☐ because the applicant failed to suggest a figure.
☐ because this figure better characterizes the invention.
b. ☐ none of the figure is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/059551**A. CLASSIFICATION OF SUBJECT MATTER***A61B 17/04(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 8 : A61B 17/04

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKIPASS(KIPO internal) "suturing", "crimping", "wound closure", "blood vessel"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6641592 B1 (JUDE S. SAUER AND JOHN F. HAMMOND) 4 November 2003 See Abstract; Figs. 1-18; Col.7, Lines 15-67; Col.12, Lines 26-42.	1, 4-6 ----- 2,3
Y	US 6368334 B1 (JUDE S. SAUER) 9 April 2002 See Abstract; Figs. 1-30; Col. 11, Lines 1-11.	2,3
A	US 6136010 A (D. BRUCE MODESITT , ET AL.) 24 October 2000 See Abstract; Figs. 1-13; Claims.	1-6
A	US 7037315 B2 (GREGORY E.SANCOFF, ET AL.) 2 May 2006 See Abstract; Figs. 1-40; Claims.	1-6
A	US 5643289 A (JUDE S. SAUER, ET AL.) 1 July 1997 See Abstract; Figs. 1-10; Claims.	1-6



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

25 SEPTEMBER 2008 (25.09.2008)

Date of mailing of the international search report

25 SEPTEMBER 2008 (25.09.2008)

Name and mailing address of the ISA/KR

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gu, Daejeon 302-701, Republic of Korea

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2008/059551

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6641592 B1	04.11.2003	US 2004-068272 A1 US 2004-068272 AA US 6641592 BA	08.04.2004 08.04.2004 04.11.2003
US 6368334 B1	09.04.2002	US 2002-123756 AA US 6368334 BA	05.09.2002 09.04.2002
US 6136010 A	24.10.2000	AU 2000-37212 A1 AU 2000-37212 A5 EP 1158907 A1 EP 1158907 A4 JP 2002-537887 JP 2002-537887 A2 JP 2002-537887 T2 US 2003-093093 A1 US 2003-093093 AA US 2004-092964 A1 US 2004-092964 AA US 2004-097978 A1 US 2004-097978 AA US 2004-122449 A1 US 2004-122449 AA US 2005-143761 A1 US 2005-143761 AA US 2006-079914 AA US 2006-142785 A1 US 2006-142785 AA US 2007-167959 A1 US 2007-167959 AA US 6964668 BB US 7001400 BA US 7235087 BB WO 00-51498 A1 WO 2000-51498A 1	21.09.2000 21.09.2000 05.12.2001 02.04.2003 12.11.2002 . A2 12.11.2002 15.05.2003 15.05.2003 13.05.2004 13.05.2004 20.05.2004 20.05.2004 24.06.2004 24.06.2004 30.06.2005 30.06.2005 13.04.2006 29.06.2006 29.06.2006 19.07.2007 19.07.2007 15.11.2005 21.02.2006 26.06.2007 08.09.2000 08.09.2000

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2008/059551

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 7037315 B2	02.05.2006	AU 2003-241521 A1	02.12.2003
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		AU 2003-241521 AA	02.12.2003
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		CA 2484865 AA	27.11.2003
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		EP 1505911 A2	16.02.2005
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		US 2003-0105476 A1	05.06.2003
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		US 2003-105476 AA	05.06.2003
		US 2004-092967 A1	13.05.2004
		US 2004-092967 AA	13.05.2004
		US 7037315 BB	02.05.2006
		US 7131978 BB	07.11.2006
		WO 0309-6885A2	27.11.2003
		WO 2003-096885 A2	27.11.2003
		WO 2003-096885 A3	05.02.2004
US 5643289 A	01.07.1997	NONE	